

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001547810001-4

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Reel #494
Semekhin Yu.V.

SEMEKHIN, Yu.V.; STARIKOVICH, S.F.

Process of filling crevasses with the ice flow. Inform.sbor.o rab.Geog.
fak.Mosk.gos.un. po Mezhdunar.geofiz.godu no.5:87-98 '60. (MIRA 16:3)
(Elbrus, Mount—Glaciers)

32339

S/081/61/000/024/075/086

B151/B101

11.9400 also 1583
AUTHORS: Bondarevskiy, G. D., Semeko, N. S., Kraskovskaya, M. I.

TITLE: Thickening properties of soaps and hard hydrocarbons in
"naphthenic" oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1961, 472, abstract
24M99 (Tr. Mosk. in-t neftekhim. i gaz. prom-sti, no. 32,
1960, 5 - 10)

TEXT: For studying the effect of temperature and viscosity of the dis-
persed medium (DM) on the thickening properties of soaps and hard hydro-
carbons, excluding at the same time the effect of the chemical nature of
the DM, two series of soft greases were prepared, thickened with Li
stearate and ceresine, and using four naphthene-paraffinic oils with
viscosities at 50°C of 82.75; 50.15; 18.70; and 11.07 cst. It has
been found that the limits of solidity of the greases, for a displace-
ment (F) at 5.5 and 50°C decreases with increasing viscosity (η) of their

Card 1/2

32339

S/081/61/000/024/075/086

B151/B101

Thickening properties of ...

DM. At the same time F decreases with increasing temperature (for constant η of the DM of the greases). As the η of the DM falls with temperature, the temperature dependence of F of the greases becomes less. The dynamic thickening effect, indicated by the difference between the effective viscosity of the greases and η of their DM, falls both with increasing temperature and with decreasing η of the DM. When there is a change in the chemical constitution of the DM, the dependence of F and the effective viscosity of the greases on the η of the DM and on temperature becomes more complicated and may take on an extreme character.

[Abstracter's note: Complete translation.] *X*

Card 2/2

SEMEKO, V., mekhanik-nastavnik

Establishing fuel norms for transport vessels. Rech. transp. 24
no.11:20-21 '65. (MIRA 19:1)

1. Moskovskoye parokhodstvo.

BOI'SHAKOV, V.M.; VINOGRADOV, A.M.; DOROKHOV, A.N.; FAZAKOV, I.V.; MERTUMYAN,
A.K.; ROMANOV, A.A.; SEMEMOVSKIY, V.D.

Floors made of large rolled gypsum cement concrete panels. Stroi.
mat. 7 no.9:26-28 S '61. (MIRA 14:11)
(Floors, Concrete)

SEMENKO, I.F.; MIKHAYLICHENKO, M.K.; SEMENKO, K.A.

Abstracts. Sov. med. 28 no.9:142-143 S '65. (MIFA 18:9)

1. Kafedra fakul'tetskoy terapii Luganskogo meditsinskogo instituta, Luganskaya oblastnaya bol'nitsa i 1-ya Luganskaya gorodskaya bol'nitsa.

KRMOROV, Yu. I., inzh.; SEMEMYAK, Yu. A., inzh.

Possibilities for using high-frequency electric motors on livestock farms. Mekh. i elek. sots. sel'khoz. 19 no.3:45-48 '61.

(MIRA 14:6)

1. Vesesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skogo khozyaystva.

(Electricity in agriculture)
(Stock and stockbreeding)

SEMEN, Ecaterina; IONESCU, B.; CHIVU, Viorica

Correlations between adrenaline, noradrenaline and mental activity.
Stud. cercet. endocr. 16 no.1:61-65 '65.

TEODORU, M.; SEMEN, Ecaterina

Myxedema and encephalopathy. (Considerations on a clinical case).
Stud. cercet. endocr. 13 no. 5:679-684 '62.

(MYXEDEMA) (CRETINISM) (GLUTAMATES)
(GROWTH) (CHILD PSYCHOLOGY) (BRAIN DISEASE)

SEMEN, N. P., Cand of Med Sci -- (diss) "Neural regulation of the process of absorbing glucoses in the small intestine. (experimental study)." L'vov, 1957, 10 pp, (L'vov State Medical Institute), 200 copies, ■ (KL, 30-57, 113)

CHETVERTAK, D.S., LYUBOVSKAYA, P.I., SEMEN, N.P.

Results of an analysis of mechanisms of neural regulation of absorption processes. Fiziol.zhur. 44 no.8:741-746 Ag '58 (MIRA 11:9)

1. Kafedra normal'noy i patologicheskoy fiziologii Meditsinskogo instituta, Chernovitsy.

(CEREBRAL CORTEX, physiology

eff. of inhib. & stimulation on intestinal absorp.
(Rus))

(INTESTINES, physiology

absorp., eff. of cerebrocortical inhib. & stimulation
(Rus))

KIRSHENBLAT, Ya.D.; GREGISHKINA, A.P. [Hrechyshkina, A.P.]; DOVGAN', Z.V.
SEMEN, N.P.

Inhibiting neural influences on the function of ovaries. Fiziol.
zhur. [Ukr.] 7 no.1:54-60 Ja-F '61. (MIRA 14:1)

1. Department of Normal Physiology of the Chernovtsy Medical
Institute.
(OVARIES) (NERVOUS SYSTEM, AUTONOMIC)

PHASE I BOOK EXPLOITATION

SOV/6491

Perchenko, Vladimir Nikolayevich, and Semen Romanovich Sergiyenko

Izbiratel'noye kataliticheskoye gidrirovaniye seraorganicheskikh soyedineniy (Selective Catalytic Hydrogenation of Sulfur Organic Compounds) Ashkhabad, 1962. 91 p. 700 copies printed.

Sponsoring Agency: Akademiya nauk Turkmenskoy SSSR.

Ed. of Publishing House: T. V. Artykova; Tech. Ed.: G. A. Ivont'yeva.

PURPOSE: The book is intended for the study of selective catalytic hydrogenation of waste and side products of processed petroleum.

COVERAGE: This book is a study of properties, reactions, and chemical structure of waste and side products of catalytic and thermal processing of petroleum. These sulfur-containing organic compounds are considered as hidden reserves in the exploitation of

Second 7/11

Selective Catalytic Hydrogenation (Cont.)

SOV/6491

various obtainable commercial products, as a means of increasing raw material utilization, and as a means of effecting an improvement in petroleum processing. Also the optimal conditions for the differentiation of sulfur organic compounds with various structures are studied by the use of selective catalytic hydrogenation reactions. There are 164 references, mostly Soviet.

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AVAILABLE: Library of Congress	
SUBJECT: Chemistry	

Card 4/4

PW/ap/ag
3-24-64

SEHENAS, L.B., inzh.

Device for checking plug-type relays. Avtom., telem.
i sviaz' 6 no.6:38 Je '62. (MIRA 15:7)

1. Kuybyshevskaya distantsiya signalizatsii i svyazi Kuybyshevskoy
dorogi.

(Electric relays—Testing)
(Railroads—Electric equipment)

SKAL'SKAYA, U.L.; SEMENASH, A.F.; LACHINSKIY, V.I.

Combined treatment of mineralized clay muds. Neft. i gaz. prom.
no.4:25-27 O-D '64 (MIRA 18:2)

SKAL'SKAYA, U.L.; SEMENASH, A.F.; LANCHINSKIY, V.I.; RABUL, N.M.

Using hydroclized polyacrylamide to stabilize clay muds. no. 7:18-20 '64.

1. TSentral'naya nauchno-issledovatel'skaya laboratoriya naftogazovogo "Ukrneftegaz".

SEMEENCHA, I. V.

Chemical Abst.
Vol. 40 No. 9
May 10, 1954
Metallurgy and Metallography

Object

Making and application of iron-graphite bearings for coal conveyers. By V. Semencha. *Vestnik Mashinostroyeniya* 33, No. 12, 56-57 (1953).—Rolling mill scale from low-C steel is calcined, ground, mixed with 14% carbon black, and remixed with 3% of pencil-grade graphite, compressed, and sintered in the usual manner. Replacement of conventional colloidal graphite with this kind eliminated oxides at the grain boundaries, improved structure and antifrictional characteristics, and lengthened the life of bearings. The life is further doubled by raising the free-C content to 1.6% and that of combined to 1% during sintering. I. D. G.

SEMEONOV, P. V., ENIG.

Springs (Mechanism)

"Manufacture of large-sized spiral springs." Vest. mash. 32 no. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, October, 1952. Unclassified.

SEmencha, P.V., inzhener.

Manufacture and use of iron-graphite bearings for rollers of coal
conveyer belts. Vest. mash. 33 no.12:66-68 D '53. (MLRA 6:12)
(Coal-handling machinery) (Bearings (Machinery))

SEmencha, P.V.

USSR/ Engineering - Gear wheels

Card 1/1 Pub. 128 - 14/25

Authors : Semencha, P. V., Engineer

Title : Increase in contact hardness of cog wheels of shaft reducing gear

Periodical : Vest. mash. 35/4, 57-61, Apr 1955

Abstract : New methods and technological rules are introduced for the treatment of reducing gear contact surfaces for the purpose of increasing their hardness. Results obtained by the new metal treating methods, as tested by the GIPROKLEMASH (State Institute for the Planning of Coal Mining Machinery), are tabulated. Six USSR references (1946-1953). Tables; graphs; drawings.

Institution :

Submitted :

SEmenchA, P. V., Cand Tech Sci -- "Study of the effect of certain factors upon
the load ~~carrying~~ capacity of gear wheels of mining machines." Mos, 1960 (Min
of Higher and Secondary Specialized Education RSFSR. Mos Mining Inst im I. V.
Stalin). (KL, 1-61, 197)

--240-

SEMENCHA, P.V., kand.tekhn.nauk

Use of nonstandard initial contours for toothed wheels on mining
machinery. Mekh. i avtom. v gor. prom. no.3:85-92 '63.

(MIRA 16:10)

ZABRODSKIY, A.G.; SMIRNOV, N.K.; Prinimali uchastiye: RUDENKO, O.A.;
FILIPENKO, I.S.; SEMENCHENKO, A.D.; KORCHEVSKIY, M.I.;
TEMASHNYUK, D.S.; SHVARTS, S.P.; BRITSKAYA, Z.A.; RESHETOVA, L.N.;
SHAKHOVA, V.A.; DANILENKO, P.L.

More about the effect of the amount of water and of its automatic
proportioning in the boiling to pulp of raw materials. Trudy
UkrNIISP no.5:13-20 '59. (MIRA 16:11)

1. Vashkovskiy zavod (for Rudenko, Filipenko, Semenchenko,
Korchevskiy, Temashnyuk, Shvarts, Britskaya). 2. Chernovitskiy
spirtovyy trest (for Reshetova, Shakhova). 3. Ukrainskiy
nauchno-issledovatel'skiy institut spirtovoy i likero-vodochnoy
promyshlennosti (for Danilenko).

ACC NR: AP7000651

SOURCE CODE: UR/0126/66/022/005/0652/0661

AUTHOR: Semenenko, A. I.

ORG: Physicotechnical Institute of Low Temperatures, AN UkrSSR (Fiziko-tehnicheskiy institut nizkikh temperatur AN UkrSSR)

TITLE: Peculiarities of the phonon spectrum in metals

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 5, 1966, 652-661

TOPIC TAGS: phonon spectrum, spectrum, Fermi level, electron

ABSTRACT: A detailed theoretical investigation of the peculiarities of the phonon spectrum in metals was carried out. This investigation supplements the results of M. I. Kaganov and A. I. Semenenko (ZhETF, 1966, 50). The particular cases investigated correspond to different types of Fermi surface contacts for which the velocities v_p and v_{p+q} are equal. The discussion is based on the expressions

$$\Delta\omega(q, \omega) = \int_{\epsilon_{\min}}^{\epsilon_{\max}} \frac{d\epsilon}{\epsilon} \Gamma(q, \hbar\omega - \epsilon), \quad (1)$$

where

$$\epsilon_{\min} = (\epsilon_p - \epsilon_{p+q} + \hbar\omega_q)_{\min}; \quad \epsilon_{\max} = (\epsilon_p - \epsilon_{p+q} + \hbar\omega_q)_{\max}.$$

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UDC: 669.017:539.3

ACC NR: AP/000651

and

$$\Delta\omega_0(q, \omega) = \int_{-\varepsilon_0}^{\varepsilon} \frac{d\varepsilon}{\varepsilon} \Delta\Gamma(q, \hbar\omega_q - \varepsilon), \quad (2)$$

where all symbols have the same meaning as in the reference above. Two specific cases considered were

$$(C_{xx}C_{yy} - C_{xy}^2) > 0; C_{yy} > 0 \quad (3)$$

and

$$(C_{xx}C_{yy} - C_{xy}^2 = 0). \quad (4)$$

It is concluded that the peculiarities of the phonon spectra may be readily found with the aid of (1) and

$$\Gamma'(q, \hbar\omega - \varepsilon) = 2\pi m |M'|^2 \begin{cases} R_0, & -R^2/m \leq \varepsilon \leq \varepsilon_0; \\ \frac{1}{2}(\hbar\omega - \varepsilon)/v_F, & \varepsilon > \varepsilon_0, \end{cases} \quad (5)$$

$$\varepsilon_0 = \frac{-R^2}{m} + \frac{1}{m} \left(p_F - \frac{p_0 - q_0}{2} + \frac{\Delta}{2} \right)^2; R^2 = p_F^2 - \frac{1}{4}(p_0 - q)^2 - m(\hbar\omega - \varepsilon) = R^2 + m\varepsilon.$$

Orig. art. has: 4 graphs and 22 equations.

SUB CODE: 20/ SUBM DATE: 09Mar66/ ORIG PEF: 005

SEN. 1. 1. 1. 1. 1.

Doctor. Candidate of Technical Sciences

1963. Vysokova sibzovaya gornaya tertiya i tsilindriya obzori.
Structure and Properties of Uranium, Thorium, and Zirconium
Collection of Articles. Moscow, Gosatomizdat, 1963.
1000 copies printed.

WORD

PART I. URANIUM-BASE ALLOYS

1. Maximova, D. K., Yu. O. Virgil'yev, and S. S. Ivanov. Solu-
tion of Aluminum, Silicon, Iron and Nickel in U-, β -, and C-
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nium Corner of the Phase Diagram of the Uranium-Aluminum-
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SEmenchenkov, A. T.

1. Semenchenkov, A. T., G. N. Bargov, and O. S. Ivanov. Effect of Alloying Elements on the Stabilities of Phases in Binary Uranium Alloys in Rapidly Cooling and Solid Solutions of Uranium.

Semenchenkov, A. T., and O. S. Ivanov. Effect of Reversal Quenching on Cracking of Uranium Alloys.

Semenchenkov, A. T., and O. S. Ivanov. Kinetics of Transformation of the α -Phase Observed by Rapid [Water] Quenching of Binary Uranium Alloys With Aluminum, Silicon, Iron, Nickel, Cobalt, and Manganese.

Semenchenkov, A. T., and O. S. Ivanov. Study of the Effect of Alloying Additions in Quenched Uranium Alloys Temperature Various Temperatures.

Ivanov, O. S., G. N. Bargov, and A. T. Semenchenkov. Study of the Phase Composition and Aging of Binary Uranium Alloys With up to 3-5 at% Zirconium or Molybdenum.

Card 3/10 IVANOV, O. S. Doctor of Chemical Science ed. Stroyeniye i svoystva splavov urana, toriya i tsikoniya; sbornik statey (Structure and Properties of Alloys of Uranium, Thorium, and Zirconium); Collection of Articles Moscow, Properties of Uranium, Thorium, and Zirconium Alloys; Collection of Articles Moscow,

- svyaz s svoistvami urana, torija i tsirkonia; izdatel'stvo i izdaniya po Chernobyl'yu; Collection of Articles on Uranium, Thorium, and Zirconium; Collection of Articles) Moscow, Gosatomizdat, 1953.
3. 1000 copies printed.
36. Terekhov, B. I., R. Kh. Tagirova, and O. S. Ivanov. Corrosion Resistance and Mechanical Properties of Low-Chromium or Low-Tin Zirconium Alloys 322
37. Soshchenkov, A. T., O. S. Ivanov, and B. B. Bobrovskiy. Corrosion Resistance of Low-Alloy Zr-Nb-Sn, Zr-Cr-Fe, Zr-Cr-Ni Alloys 323
38. Kishinevskiy, V. B., V. K. Grigorovich. Heat and Oxidation Resistance of Zirconium-Aluminum Alloys With Additions of Chromium, Vanadium, and Molybdenum 335
39. Kishinevskiy, V. B., V. K. Grigorovich. Study of Ternary Zirconium-Aluminum-Tin Alloys 346
40. Komozov, L. I., V. B. Kishinevskiy, O. S. Ivanov, and V. K. Grigorovich. Corrosion Resistance of Some Binary and Ternary Iodide-, Magnesium-Reduced, or Electrolytic Zirconium-Base Alloys 354

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SEMENTCHENKO, D. I.

123-1-734-D

Translation from: Referativnyy Zhurnal, Mashinostroyeniye, 1957,
Nr 1, p. 110 (USSR)

AUTHOR: Semenchenko, D. I.

TITLE: Investigation of the Influence of the Precision of
Hobbing Cutters and the Elements of Tooth Cutting
Technique on the Precision of Gearings Being Cut
(Issledovaniya vliyaniya tochnosti chervyachnykh frez i
elementov tekhnologii zubofrezerovaniya na tochnost'
narezayemykh zubchatykh koles)

ABSTRACT: Bibliographic entry on the author's dissertation for the
degree of Candidate of Technical Sciences, presented to
the Moscow Higher Technical School, (Mosk.vyssh. tekhn.
uch-shche), Moscow, 1956.

ASSOCIATION: Moscow Higher Technical School
(Mosk.vyssh. tekhn. uch-shche)

Card 1/1

SEmen CHENko, D. I.

AID P - 5034

Subject : USSR/Engineering

Card 1/1 Pub. 103 - 5/22

Authors : Semenchenko, D. I. and V. I. Semenov

Title : Relieving worm-gear hobs

Periodical : Stan. i instr., 4, 21-22, Ap 1956

Abstract : The authors designed a special tool with a combined cam, the shape of which consists of two Archimedean spirals of different incline. Such cams can process any desired form of hob teeth without changing the cam or replacing the hob. With the introduction of this tool labor productivity in hob tooth manufacture has risen 20%. Five drawings and 2 tables.

Institutions: "Frezer" (Milling Cutter) Plant, Sverdlovsk Tool Plant, Moscow and Tomsk Tool Plants.

Submitted : No date

SEMENCHENKO, D.I.

28-1-3/42

AUTHOR: Semenchenko, D.I., Engineer

TITLE: Tooth Profile of Helical Gear Cutting Mills (Profilirovaniye chervyachnykh zuboreznykh frez)

PERIODICAL: Standartizatsiya, # 1, Jan-Feb 1957, p 15-20 (USSR)

ABSTRACT: The article criticizes the methods used by industrial installations in the USSR for measuring the tooth profile of helical gear cutting mills, and the standard "ГОСТ 3346-46" (for helical gear cutting mill dimensions), as not being in agreement with the theory of gear cutting, and as being misleading. Often, when higher precision is required, measurements on one and the same mill tooth by different instruments give different and contradictory results which are difficult to explain. Various measuring methods are cited, for example measuring by templets, by universal microscope, by projector, by Klingenberg's "МА-250" and by Druzhinin's "ИД" contact-measuring instruments. The "ИД" produced by the Moscow Tool Plant, is shown by a schematic drawing. The inherent causes of errors in the cited measuring methods are considered in detail. It is concluded that the "ГОСТ 3346-46" should contain regulations for tooth profiles in axial section only, since the values of profile angles in this section are the same for all measuring

Card 1/2

Tooth Profile of Helical Gear Cutting Mills

28-1-3/42

methods and means.

The article contains 4 tables and 5 diagrams.

ASSOCIATION: All-Union Research Institute for Tools (Vsесоузныy nauchno-issledovatel'skiy instrumental'nyy institut)

AVAILABLE: Library of Congress

Card 2/2

SEmenchenko D.I.

Increasing the precision of worm hobs. Stan.1 instr. 28 no.4:21-24
Ap '57. (MLRA 10:5)
(Gearing)

25(1)

PHASE I BOOK EXPLOITATION

SOV/1519

Semenchenko, Dmitriy Ivanovich, Compiler, Candidate of Technical Sciences

Novoye v voprosakh teorii profilirovaniya i izmereniya chervyachnykh zuboreznykh frez; iz opyta sovmestnoy raboty VNII i MIZ (New Trends in the Theory of Gear Hob Tooth Form Design and Measurement; Combined Experience of VNII and MIZ All-Union/Institute for Scientific Research on Instruments and Moscow Instrument Plant) Moscow, Tsentr. byuro tekhn. informatsii ENIMS, 1958. 65 p. 1,500 copies printed.

Sponsoring Agencies: USSR Gosudarstvennaya planovaya komissiya. Glavnoye upravleniye nauchno-issledovatel'skikh i proyektnykh organizatsiy; Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut; and Moskovskiy instrumental'nyy zavod.

Ed.: L.Ye. Pavlov; Tech. Ed.: Yu. M. Lazarev.

PURPOSE: The book is intended for toolmakers, technicians, engineers, and designers.

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New Trends in the Theory (Cont.)

SOV/1519

COVERAGE: The book presents an approximate method for designing gear-hob tooth form and describes the measuring of hob tooth form using various instruments. The names of V.A. Shishkov and A.N. Grubin, doctors of technical sciences, are mentioned as having contributed to this field. There are 5 references, all Soviet.

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New Trends in the Theory (Cont.)

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AVAILABLE: Library of Congress (TJ1186.S46)

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5-25-59

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SEMENCHENKO, D.I., kand. tekhn. nauk; SHEVCHENKO, A.N.; YULIKOV,
M.I., kand. tekhn. nauk, nauchnyy red.; CHIGAREVA, E.I.,
red.; VIKTOROVA, Z.N., tekhn. red.

[Gear-cutting tools and tools for automatic lines; survey
of foreign designs] Zuboreznyi instrument i instrument av-
tomaticheskikh linii; obzor zarubezhnykh konstruktsii. Mo-
skva, TSINTIMASH, 1961. 57 p. (MIRA 16:5)
(Gear-cutting machines) (Metal-cutting tools)
(Automation)

SEMENCHENKO, D.I., kand. tekhn. nauk, dets.; UKHACHEV, V.A.;
MALKIN, A.Ya., doktor tekhn. na k, prof., red.; SUZANOVICH,
M.I., nauchn. red.

[Instruments for automating production in use abroad] In-
strument dlja avtomatizirovannogo proizvodstva zarubezh-
nykh firm. Moskva, 1963. 85 p. (Novye mashiny, oborudo-
vanie i sredstva avtomatizatsii. Serija: U-77)

(MIRA 17:5)

l. Moscow. TSentral'nyy institut nauchno-tehnicheskoy in-
formatsii po avtomatizatsii i mashinostroyeniyu.

SEmenchenko, Dmitriy Ivanovich, kand. tekhn. nauk; VERZHBINSKAYA,
I.I., red.

[Hard alloys and cutters of the Swedish firm "Sandvik
Koromant"] Tverdye splavy i reztsy shvedskoi firmy
"Sandvik Koromant." Leningrad, 1965. 33 p.
(MIRA 18:7)

SEΜΕΝЧЕНКО, D.I.

Present trends in the design of metal-cutting tools. Inform.biul.
VDNKh no.5:5-7 My '64. (MIRA 18:5)

1. Zaveduyushchiy laboratoriye avtomatizirovannogo proizvodstva
Vsesoyuznogo nauchno-issledovatel'skogo instrumental'nogo instituta.

KORNIYENKO, A.M.; SHTEL'MAKHOV, M.S.; GEYLER, Z.Sh.; BERESNEV, V.A.;
KOTLIK, S.B.; GORFINSKIY, Kh.M.; ZEL'DIN, Yu.R.; KURGIN, Yu.M.;
BELYAYEV, V.G.; ZAK, P.S.; ZAYTSEV, A.A.; LI, A.M.; SKVORTSOV, L.N.;
LUTTS, R.R.; KHVINGIYA, M.V.; NINOSHVILI, B.I.; SEMENCHENKO, D.I.;
SUKHANOV, V.B.

Soviet inventions in mechanical engineering. Vest.mashinostr.
(MIRA 18:12)
45 no.11:87-88 N '65.

Semenchenko, D.P.
USSR/Electrochemistry

B-12

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26317

Author : D.P. Semenchenko, K.G Il'in

Inst : Novocherkassk Polytechnical Institute.

Title : Concerning an Incorrect Deduction of M. LeBlanc

Orig Pub : Nauch. tr. Novocherkas. politekhn. in-ta, 1956, 34, (48), 61-62

Abstract : The authors' experimental data concerning the yield of oxygen and chlorine are given; they have been obtained by the electrolysis of HCl solutions (0.016 to 2.000 n.) using smooth Pt anodes and current densities of 0.05, 0.1 and 0.2 a per sq.cm at 25°. On the basis of an analysis of their own and bibliographical data, the authors note that a simultaneous liberation of chlorine and oxygen takes place, when diluted HCl solutions are electrolysed, and they consider that this fact disproves the known assertion of M. Le Blanc (Rukovodstvo po elektrokhimii, Giz. M.-L., 1930, 366) that the only anode process at the electrolysis of diluted HCl solutions is the separation of oxygen.

Card : 1/1

SEMENCHENKO, F.Ya., Geroy Sotsialisticheskogo truda, starshiy dorozhnyy master; ISAKOV, I.F., kand. tekhn. nauk; KORETS, N.G., starshiy dorozhnyy master; VOLOSHKO, Yu.D., kand. tekhn. nauk; CHERKASSKIY, M.M., inzh.; SHATERKOV, V.I., kand. tekhn. nauk; LIPOVSKIY, R.S., kand.tekhn.nauk; FRISHMAN, M.A., prof., red.; POTOTSKIY, G.I., inzh., red.; VOROB'YEVA, L.V., tekhn. red.

[Current maintenance and repair of tracks] Tekushchее soderzhanie i remont puti; opyt vuteitsev Nizhnedneprovsk-Uzlovskoi distantsii Pridneprovskoi dorogi. Moskva, Transzheldorizdat, 1962. 55 p.
(MIRA 16:1)

(Railroads--Maintenance and repair)

SEVENCHENKO, G. I.

Medicine

Ankylosis of the inferior maxillary joint and its treatment. Kiev. Gos. med. i,d-vo USSR,
1951.

Monthly List of Russian Accessions, Library of Congress, April 1952, 1952,
UNCLASSIFIED

SEMENCHENKO, G.I., dotsent

Treatment of chronic osteomyelitis of the jaw with protein blood substitute BK-8. Stomatologija no.2:36-40 Mr-Ap '55. (MLRA 8:5)

1. Iz kafedry khirurgicheskoy stomatologii Kiyevs'kogo meditsinskogo stomatologicheskogo instituta (dir. prof. A.K.Gorchakov).

(OSTEOMYELITIS,

jaws, ther., protein blood substitute)

(JAWS, diseases,

osteomyelitis, protein blood substitute)

(BLOOD SUBSTITUTES,

ther. of osteomyelitis of jaws)

SEMECHENKO, G.I., dotsent (Kiev)

Peculiarities of the course of odontogenic osteomyelitis of the
jaws. Probl. stom. 3:153-158 '56
(JAWS--DISEASES) (OSTEOMYELITIS) (MLRA 10:5)

SEmenchenko, G.I., dotsent (Kiyev)

Treating chronic odontogenic osteomyelitis of the jaws with
the BK-8 protein blood substitute and surgery. Probl. stom.
3:169-172 '56 (MIRA 10:5)
(OSTEOMYELITIS) (JAWS--SURGERY) (BLOOD PLASMA SUBSTITUTES)

SEMENCHENKO, G.I., dotsent

The effect of streptomycin on regeneration in experimental osteomyelitis of the mandible. Stomatologija 35 no.2:26-31 Mr-Ap '56. (MLRA 9:8)

1. Iz Kiyevskogo ordena Trudovogo Krasnogo Znameni meditsinskogo instituta imeni akad. A.A.Bogol'tsa i patologoatomiceskoy laboratorii (rukoveditel' - starshiy nauchnyy sotrudnik G.L.Yemets) Ukrainskogo tsentral'nogo nauchno-issledovatel'skogo instituta ortopedii i travmatologii.

(JAWS--DISEASES) (OSTEOMYELITIS) (STREPTOMYCIN)

SEMENCHENKO, G.I., dotsent

Regeneration of bone tissue in osteomyelitis of the lower jaw.
Vrach.delo no.2:157-161 F '57. (MLRA 10:6)

1. Kiyevskiy meditsinskiy institut i patologo-anatomiceskaya
laboratoriya (zav. - st.nauchn.sotr. G.L.Yemets) Ukrainskogo
nauchno-issledovatel'skogo instituta ortopedii i travmatologii.
(OSTEOMYELITIS) (JAWS--DISEASES)

SEVENCHENKO, G.I., Doc Med Sci -- (diss) "Osteomyelitis of
the lower jaw in experiment and in the clinic." Kiev, 1958,
22 pp (Kiev Order of Labor Red Banner Med Inst im Academician
A.A. Bogomol'ets) 250 copies (KL, 42-58, 117)

- 56 -

S

USSR/Human and Animal Morphology - The Skeleton.

Abs Jour : Ref Zhur Biol., No 5, 1959, 21552

Author : Semenchenko, G.I.

Inst Title : The Problem of the Pathogenesis of Osteomyelitis of the Jaws

Orig Pub : Stomatologiya, 1958, No 3, 24-27

Abstract : Experiments were performed on 140 rabbits. In the 1st series of experiments the left mandibular nerve was stimulated for a long time by placing a metal ring on it; a Staphylococcus aureus culture was injected into the bone marrow substance on the left half of the mandible. In the 2nd series of experiments staphylococci were injected and after this drug-induced sleep was produced for 1 month, lasting 20-21 hours a day (medinal injection). In the 3rd series of experiments amphetamine sulfate, which increased

Card 1/2

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SEMENCHENKO, G.I., dots.

Role of the nervous system in the pathogenesis of odontogenic osteomyelitis of the jaw, Vrach.delo no.4:395-399 Ap'58 (MIRA 11:6)

1. Kiyevskiy meditsinskiy institut i patologoanatomiceskaya laboratoriya (zav. - st.nauchn. sotr. G.I. Yemets) Ukrainskogo nauchno-issledovatel'skogo instituta ortopedii i travmatologii.
(JAWS--DISEASES)

SEMENENKO, G.I.

Biosynthesis of purines of nucleic acids in higher plants.
Biokhimiia 24 no.3:465-471 My-Je '59. (MIRA 12:9)

1. The State University, Kharkov.
(PURINE METABOLISM) (PLANTS--METABOLISM)

SEMENCHENKO, G.I.

Experimental odontogenicosteomyelitis of the mandible. Probl. stom.
5:219-224 '60. (MIRA 15:2)

1. Kiyevskiy meditsinskiy institut.
(JAWS—DISEASES)

SEmenchenko, G.I.

Destruction of bone tissue in odontogenic osteomyelitis of the jaws.
Probl. stom. 5:225-230 '60. (MIRA 15:2)

1. Kiyevskiy meditsinskiy institut.
(JAWS--DISEASES)

SEMENCHENKO, G.I., doktor med.nauk (Odessa)

"Short prescription manual for stomatological specialists" by I.O.
Novik, A.I.Marchenko. Vrach.delo no.5: 535 My '60. (MIRA 13:11)
(MEDICINE--FORMULAE, RECEIPTS, PRESCRIPTIONS)
(STOMATOLOGY)
(NOVAK, I.O.)
(MARCHENKO, A.I.)

SEmenchenko, G.I. [Semenchenko, H.I.], doktor med. nauk; VInets'KA,
L.M. [translator]; DANILEVSKIY, M.F. [Danylev's'kyi, M.F.],
red.; PTOTS'KA, L.A., tekhn. red.

[Odontogenic osteomyelitis of the jaws; its pathogenesis,
pathological anatomy, and clinical forms] Odontogennyi osteo-
mielit shchelep; patogenez, patologichna anatomia i kli-
nichni formy. Kyiv, Derzh. med. vyd-vo URSR, 1961. 152 p.
(MIRA 15:3)

(OSTEOMYELITIS) (JAWS—DISEASES)

SEMENCHENKO, G.I., doktor med.nauk

"Concise prescription manual for the stomatologist" by I.O.Novik,
A.I.Marchenko. Reviewed by G.I.Semenchenko. Stomatologiya 40
no.1:104 Ja-F '61. (MIRA 14:5)
(MEDICINE--FORMULAE, RECEIPTS, PRESCRIPTIONS)
(STOMATOLOGY) (NOVIK; I.O.) (MARCHENKO, A.I.)

SEMENCHENKO, G.I., doktor meditsinskikh nauk (Odessa)

"Vacuum treatment of paradentosis" by V.I.Kulzhenko. Reviewed by
G.I.Semenchenko. Vrach. delo no.10:154-155 O '61. (MIRA 14:12)
(GUMS—DISEASES) (VACUUM APPARATUS)
(KULAZHENKO, V.I.)

SEMENCHENKO, G.I., prof.

Surgical correction of some forms of developmental anomalies and deformations of the maxilla. Trudy Nauch.-issl.inst.stom. no.10:
5-17 '62.
(MIRA 15:10)
(JAWS--SURGERY)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001547810001-4

SEMENCHENKO, G.I., prof.

Correction of microgenia caused by ankylosis of the temporomandibular joint. Trudy Nauch.-issl.inst.stom. no.10:18-24 '62.

(MIRA 15:10)

(TEMPROMANDIBULAR JOINT--ANKYLOSIS) (CHIN--ABNORMALITIES AND DEFORMITIES)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001547810001-4"

SEMEENCHENKO, G.I. (Odessa)

Denticles in osteomyelitis of the jaw. Probl.stcm. 6:214-217 '62.

(MIRA 16:3)

(OSTEOMYELITIS) (TEETH—ABNORMALITIES AND DEFORMITIES)
(JAWS—DISEASES)

SOLITSEV, Aleksey Mikhaylovich; SEMENCHENKO, G.I.[Semenchenko, H.I.],
red.

[Use of preserved cartilage in plastic facial surgery] Za-
stosuvannia konserвованого хряща при пластичних опе-
ратціях на обличчі. Kyiv, Zdorov'ia, 1964. 131 p.
(MIRA 18:2)

SEMENCIENKO, G.I., prof. (Odessa)

Bone grafting in congenital harelip and cleft palate. Probl.
chel.-lits. khir. no.1:102-107 '65.

(MIRA 18:10)

VVEDENSKIY, V. S.; RUBENCHIK, Yu I.; SEMENCHENKO, G. V.; KRYAKOVSKIY,
Yu. V.; YAVOYSKIY, V. I.

Improved methods for the final deoxidation of 10Kh16N25M6 and
40KhNMA steels. Izv. vys.ucheb.zav.; chern.met.7 no. 5:40-45
'64. (MIRA 17:5)

1. Moskovskiy institut stali i splavov i Izhevskiy metallurgicheskiy
zavod.

L 15200-65 EWT(m)/EWA(d)/EWP(t)/EWP(b) ASD(f)-2/ASD(w)-3/AFMD/C/ESD(gs) MJW/
JD/JG/MLK
ACCESSION NR: AT4048715 S/0000/64/000/000/0209/0213

AUTHOR: Vvedenskiy, V. S., Prokhorenko, K. K., Zhdanov, P. L., Semenchenko,
G. V., Vasil'yev, N. Ye., Verkhovtsev, Z. V., Nakonechnyy, N. F.

TITLE: A study of the effect of rare earth metals on the quality of stainless steels and
steel R18

SOURCE: Vsesoyuznoye soveshchaniye po splavam redkikh metallov, 1963. Voprosy teorii i primeneniya redkozemel'nykh metallov (Problems in the theory and use of rare-earth metals); materialy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 209-211

TOPIC TAGS: rare earth metal, stainless steel, cerium modifier, steel plasticity, austenite-carbide steel, austenite-ferrite steel, ferrocerium, steel inclusion, cerium oxysulfide, red hardness/steel R18

ABSTRACT: The study was undertaken to determine whether cerium introduced as a modifier would increase plasticity during rolling of steels 10Kh16N25M6 (austenite-carbide) and 07Kh25N13 (austenite-ferrite) which resist deformation. Tests were conducted under industrial conditions; ferrocerium corresponding to a Ce concentration of up to 0.4% was added to the metal before discharge or into the ladle. Additions of 0.2% to either steel increased plasticity during hot deformation. Increasing the Ce to 0.4% decreased

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ACCESSION NR: AT4048715

plasticity, owing to the formation of specific defects near the surface in the transcrystalline zone consisting of accumulations of small inclusions, possibly cerium oxides and sulfides. In the 10Kh16N25M6 steel, such addition led to a change in the distribution of carbides in the cast metal, owing probably to a decrease in carbon solubility; an increase in cerium favored carbide segregation throughout the grains rather than at their boundaries, leading to a more even distribution of carbides in the outer ingot layers. Such addition had no significant influence on the amount of the alpha phase and its distribution in the 07Kh25N13 steel. Its introduction led to a new form of non-metallic dot-like inclusions, apparently cerium oxysulfides, accumulating unevenly in the steel. Increasing the cerium addition led to a sharp decrease (to almost complete disappearance) of manganese and iron sulfides and silicates. Cerium modification of the 10Kh15N25M6 steel at a 0.15-0.20% concentration resulted in increased exterior and interior plasticity and increased the yield of suitable blooms by 8%. Ferrocerium or a mixture of rare earth metals was added to the R18 steel after reduction; performance and red hardness were determined after oil quenching. Red hardness increased by 25C, due to the increased resistance of the martensite to heating. Polished specimens of the cast steel showed a more even distribution of the ledeburite eutectic; this increased the plasticity during rolling. The modifier did not increase the yield. Orig. art. has: 4 figures.

Card 2/3

L 15200-65
ACCESSION NR: AT4048715

ASSOCIATION: None

SUBMITTED: 13Jun64

NO GEF SOV: 000

ENCL: 00

OTHER: 000

SUB CODE: MM

0

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3/3

Semenchenko, I. B.

Core hardening by chemical means. I. B. Semenchenko,
Litinoe Proizvodstvo 1955, No. 12, 1-2. Sand and 8-9% of
1.42-1.55 sp. gr. water glass are mixed not longer than 8-10
min. and tamped in the same core boxes as regular cores.
These cores, while still in boxes, are vented with 6-8 mm.
wire, 5-6 mm. metallic tubes placed in these holes, and the
cores are blown with CO_2 at not more than 8 lb./sq. in.
for 15-60 sec. with 1 kg. CO_2 per ton of castings.

I. D. Gat

SEMENCHENKO, Ivan Borisovich, inzh.; SVET, Ye.B., red.; KUZNETSOVA,
O.Ya., tekhn. red.

[Control of gas porosities in steel castings; from experience acquired by the Chelyabinsk Machinery Plant] Bor'ba s gazovoi poristost'iu stal'nykh otlivok; iz opyta raboty Cheliabinskogo mekhanicheskogo zavoda. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1962. 46 p. (MIRA 16:4)

1. Glavnny metallurg Chelyabinskogo mekhanicheskogo zavoda
(for Semenchenko).

(Steel castings—Defects)

SEMENCHENKO, IVAN IVANOVICH

Rezhushchii instrument; konstruirovaniye i proizvodstvo. Moskva, Mashgiz,
1944 +- illus., diagrs.

Bibliography at end of each chapter.

The cutting tool; designing and manufacturing.

DLC: TJ1230.S4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

CHUDAKOV, Ye.A., akademik, glavnnyy redaktor; AKOPOV, S.A., redaktor; ARTOBOL' LEVSKIY, I.I., redaktor; ACHERKAN, N.S., redaktor; BEZPROZVANNYY, I.M.. redaktor; GUDTSOV, N.T., redaktor; DIKUSHIN, V.I., redaktor; YEFHEMOV, A.I., redaktor; ZAPOROZHETS, V.K., redaktor; ZIMIN, A.I., redaktor; KAZAKOV, N.S., redaktor; KIRPICHNIK, M.V., redaktor; KOVAN, V.M., redaktor; KONYUSHAYA, Yu.P., redaktor; LIPGART, A.A., redaktor; MALYSHEV, V.A., redaktor; MARTENS, L.K., redaktor; MARIYENBAKH, L.M., redaktor; NIKOLAEV, G.A., redaktor; ODING, I.A., redaktor; PATON, Ye.O., redaktor; RAMZIN, L.K., redaktor; RUBTSOV, N.N., redaktor; SAVERIN, M.A., redaktor; SEMEN-CHENKO, I.I., redaktor; SERENSEN, S.V., redaktor; SHAMNI, N.A., redaktor; SHELEST, A.N., redaktor; SHUKH GAL'TER, L.Ya., заместитель главного redaktora, redaktor; YAKOVLEV, A.S., redaktor.

[Machine construction encyclopedic handbook] Mashinostroenie; entsiklopedicheskii spravochnik. Part 1. [Engineering calculations in machine construction] Inzhenernye raschety v mashinostroenii. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, Vol. 1. no.1. 1947. 548 p.

(Mechanical engineering)

(MLRA 8:1)

SELENCHENKO, I. I.

Technology

Typical technological processes on tools with plastics from hard alloys, Moskva,
Mashgiz, 1951.

Monthly List of Russian Accessions, Library of Congress, December 1952, UNCLASSIFIED

SEMEENCHENKO, I.I., doktor tekhnicheskikh nauk, professor; POPOVA, S.M.,
tekhnicheskiy redaktor

[Highspeed cutting of metals and cutting tools] Skorosnoe rezanie
metallov i instrument. Pod red. I.I.Semenchenko. Moskva, Gos.
nauchno-tekhnik.izd-vo mashinostroit.lit-ry, 1951. 82 p. (MLRA 10:10)

l. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy
institut
(Metal cutting)

SEMECHENKO, I.I., professor, doktor tekhnicheskikh nauk, redaktor;
TIKHONOV, A.Ya., tekhnicheskiy redaktor.

[Standard industrial practices in manufacturing hard alloy-tipped tools] Tipovye tekhnologicheskie protsessy na instrumenty s plastinkami tverdogo splava. Pod red. I.I.Semenchenko. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1951. 119 p.
[Microfilm]

(MIRA 7:11)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut.

(Cutting tools)

SEMENCHENKO, I.I., professor, doktor tekhnicheskikh nauk, redaktor;
TIKHONOV, A.Ya., tekhnicheskiy redaktor.

[Design of hard alloy tools] Konstruktsii tverdo-splavnogo instrumenta. Pod red I.I. Semenchenko. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. 1951. 133 p. (MLRA 8:9)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut.
(Cutting tools)

SEZENENKO, I. T.

NOVYE KONSTRUKTSII REZUJUSHCHIKH INSTRUMENTOV (NEW CUTTING TOOL CONSTRUCTIONS) MOSKVA, MASHGIZ, 1952.

103 P. DIAGRS., TABLES.

AT HEAD OF TITLE: MOSKOVSKIY STAN-KOINSTRUMENTAL'NYY INSTITUT. KAFEDRA INSTRUMENTAL'NOE PROIZVODSTVO.

SO: 1/5
62.339
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GRUDOV, P.P., kandidat tekhnicheskikh nauk, dotsent; SEMENCHENKO, I.I., doktor tekhnicheskikh nauk, professor, redaktor; SOKOLOVA, T.Y., tekhnicheskiy redaktor.

[Metal cutting with increased feedings] Obrabotka metallov s uvelichennymi podachami. Pod red. I.I.Semenchenko. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sustrojstv. lit-ry, 1954. 30 p.
(Metal cutting)

SEMENCHENKO, I.I.

25(7)

PHASE I BOOK EXPLOITATION

SOV/1257

Moscow. Stankoinstrumental'nyy institut. Kafedra "Instrumental'noye proizvodstvo."

Novoye v konstruirovaniu metallorezhushchikh instrumentov (Recent Developments in the Design of Metal-cutting Tools) Moscow, Mashgiz, 1958. 229 p. 5,000 copies printed.

Ed.: Semenchenko, I.I., Professor; Ed. of Publishing House: Balandin, A.F.; Tech. Ed.: Gerasimova, Ye.S. and Uvarova, A.F.; Managing Ed. for Literature on Metal Working and Tool Making (Mashgiz): Beyzel'man, R.D., Engineer.

PURPOSE: The book is intended for engineers and technicians of the machine-building industry.

COVERAGE: In this collection of articles results are presented of investigations carried out at the chair of "Tool Making" of the Moscow Machine Tool and Tool Making Institute imeni I.V. Stalin. The articles discuss new features in designing highly productive metal-cutting tools; generating cutters, cutter gear generating heads, hobs and gear shaper cutters for cutting gears for subse-

Card 1/3

Recent Developments (Cont.)

SOV/1257

quent shaving, of flat broaches for broaching bodies of rotation, and circular broach cutters for cutting straight level gears with circular tooth profile. Problems of definition and the classification of metal-cutting tools are also investigated. The role of Russian toolmakers claimed to be the first in the world to manufacture rifles with interchangeable parts is related. No personalities are mentioned. There are 24 references, all Soviet.

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AVAILABLE: Library of Congress Card 3/3	GC/sfm 3-26-59

SEMENCHENKO, Ivan Ivanovich, doktor tekhn. nauk, prof., zasl. deyatel' nauki i tekhniki; MATYUSHIN, Valentin Mikhaylovich, doktor tekhn. nauk, prof.; SAKHAROV, Georgiy Nikoalayevich, kand. tekhn. nauk, dots.; SHEVCHENKO, N.A., doktor tekhn. nauk, prof., rets.; IVANOVA, N.A., red. izd-va; EL'KIND, V.D., tekhn. red.

[Design and construction of metal-cutting tools] Proektirovaniye metallorezhushchikh instrumentov. Pod red. I.I.Semenchenko. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1962. 952 p.

(Metal-cutting tools)

VOROB'YEV, V.M., kand. tekhn. nauk, dots.; SEMENCHENKO, I.I., doktor tekhn. nauk, prof., red.

[Profiling cutters for parts with helical grooves] Profilirovaniye frez dlia izdelii s vintovymi kanavkami; uchebno-metodicheskaya instruktsiya po proektirovaniyu frez. Pod red. I.I.Semenchenko. Moskva, Mosk. stankoinstrumental'nyi in-t, 1962. 41 p.

(MIRA 16:4)

(Metal-cutting tools)

LYUKSHIN, V.S., dots., kand. fiz.-mat.nauk; SEMENCHENKO, I.I.,
zasl. deyatel' nauki i tekhniki doktor tekhn.nauk,prof.,
otv.red.

[Theory of the envelope of a family of surfaces; applied to
the design of metal cutting tools] Teoriia ogibaiushchei se-
meistva poverkhnostei; primenitel'no k proektirovaniyu re-
zhushchikh instrumentov. Moskva, Mosk. stankoinstrumental'-
nyi in-t, 1963. 262 p. [Album of drawings] Al'bom cherte-
zhei. 19 p. (MIRA 18:3)

YEROFEEV, A.F.; SEMENCHENKO, I.I., zasl. deyatel' nauki i tekhniki,
doktor tekhn. nauk, prof., otv. red.

[Some characteristics of cutting internal gears with gear
cutters; separate lecture] O nekotorykh osobennostiakh na-
rezaniia zubchatykh koles vnutrennego zatspelenia dolbia-
kami; otdel'naia lektsiia. Moskva, Mosk. stankoinstru-
mental'nyi in-t, 1964. 92 p. (MIRA 17:12)

7 (3), 24 (7)

AUTHORS: Lyalikov, K. S., Belonogova, I. N., SOV/48-23-10-29/39
Meleshko, K. Ye., Semenchenko, I. V., Kharchenko, A. P.

TITLE: A New Apparatus and a Method of Investigating the Spectra of
Earth-surface Reflection

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959,
Vol 23, Nr 10, p 1247 (USSR)

ABSTRACT: At the Laboratoriya aerometodov AN SSSR (Laboratory for Aero-methods of the AS USSR) a new apparatus and a method were developed, which make it possible to investigate the spectral brightness of objects in aerial photographs. Two types of photoelectrical devices were developed. A. P. Kharchenko developed a photoelectrical spectrophotometer which operates within the range of from 400 to 1000 m μ . It is used for investigations carried out from the ground. For the purpose of investigating the spectral brightness of objects from an airplane, Meleshko and Semenchenko developed a fast single-beam photoelectric spectrometer, in the case of which recording takes place in an electron beam tube (a so-called "spectrovisor"). This device operates within the range of 450-900 m μ . Both devices were tested in 1958 with good success.

Card 1/2

A New Apparatus and a Method of Investigating the
Spectra of Earth-surface Reflection

SOV/48-23-10-29/39

A method for the rapid construction of the curves of spectral brightness was worked out by means of which the spectral characteristic of a number of objects has already been obtained from aerial pictures taken in the South of the European part of the USSR.

Card 2/2

LYALIKOV, K.S.; SEMENCHENKO, I.V.

Polarizing absorption spectra of some cyanine sensitizing
dyes. Zhur.nauch.i prikl.fot.i kin. 5 no.3:161-167
My-Je '60. (MIRA 13:7)

1. Laboratoriya aerometodov AN SSSR.
(Photographic sensitometry) (Cyanines)

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TITLE: Polarizing light filters in marine aerial photography

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TEXT: The present paper deals with the theory and methods of reducing
the solar reflection in marine aerial photography with the aid of
polarizing light filters (polaroids). The recommendation to use the
latter for such purposes has been made in Refs. 17, 18. Experimental
marine aerial photographs with the use of polaroids were taken by the
Laboratory of Aerial Methods of the AS USSR in summer 1958. It was found
possible to extinguish the reflections in question. Still, polaroids
are no universal means for their elimination. The theory of reduction
of brightness of reflection with the aid of a polaroid is described first,
and the following formulas are derived:

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$$s = T_r : 0.5 k = 1 - q + 2q \cos^2 \xi \quad (3)$$

$$q = \left[\frac{\sin^2(\varphi - \psi)}{\sin^2(\varphi + \psi)} - \frac{\operatorname{tg}^2(\varphi - \psi)}{\operatorname{tg}^2(\varphi + \psi)} \right] : \left[\frac{\sin^2(\varphi - \psi)}{\sin^2(\varphi + \psi)} + \frac{\operatorname{tg}^2(\varphi - \psi)}{\operatorname{tg}^2(\varphi + \psi)} \right]. \quad (5)$$

$$\sin \psi = \sin \varphi : n = 0.75 \sin \varphi \quad (6), \quad \sin \beta' = \sin \beta : n' = \sin \beta : 1.521 \quad (7), \quad \cos 2\varphi = \sin h \cos \beta - \cos h \sin \beta \cos \gamma \quad (8),$$

$$\sin \gamma = \cos h \frac{\sin \xi}{\sin 2\varphi}. \quad (9), \quad \cos \alpha = \cos \beta \cos \varphi + \sin \beta \sin \varphi \cos \gamma \quad (10),$$

$\operatorname{ctg} \xi = \cos \beta' \tan \psi \quad (11), \quad \cos \xi = -\cos \gamma \cos \xi + \sin \gamma \sin \xi \cos (\beta - \beta')$
 (12). It is possible by these formulas to calculate the values of s and α for known h , β , and ψ . T is the amount of light passing through a real polaroid. k is a coefficient dependent upon the quality of the polaroid, and is about equal to 0.7-0.8. q is the polarization degree of the light incident upon the polaroid. ξ is the angle between the direction of the light vector in the polarized ray hitting the polaroid and that in the ordinary ray (which penetrates the polaroid). h is the sun height,

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β is the angle of inclination of the projecting ray, ϑ is the angle between the radius vector of the point concerned and the radius vector opposite to the sun's azimuth. α is the angle of incidence of solar rays upon the water surface, and ψ the corresponding angle of refraction. n is the refractive index of water. All other angles may be seen from Fig. 3a. Such calculations have been made by the authors for different β and ϑ values for $h = 15, 25, 35$, and 45° . Results are presented in Fig. 4 in the form of isolines of magnitudes α^0 and $S\%$. The α -isolines are dashed, while the S -isolines are dash-dotted. Fig. 4 was obtained on the assumption that the axis of the polaroid is precisely perpendicular to the plane of the sun vertical. In practice, this involves a certain error χ . It is found to be necessary for the polaroid to be adjusted with sufficient accuracy, as already at $\chi = 5^\circ$ the coefficient S becomes very large (Fig. 5). The S -isolines (Fig. 4) refute the opinion holding that the polaroid is able to extinguish only a very narrow strip of the hotspot (in perpendicular to its axis). This widely accepted opinion is based upon the identification of the angle ψ with the angle χ . A knowledge of the S -isolines only is not sufficient to solve the problem as to how the reflection can be reduced, since the density of the

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negative is not proportional to the brightness of the object. The reduction of the density of reflection in the point concerned is shown to depend not only on s but also on the brightness of reflection in this point. The brightness again depends on the form of the water surface, i.e., on the hydrometeorological conditions. Table 1 gives the absorption and reduction values of reflection, as obtained from the analysis of the above-mentioned experiment. It follows from Fig. 4 and Table 1 that only at $h \leq 45^\circ$ it is suitable to use the polaroids to reduce reflection and only at a focal length of the aerial camera of $f \leq 140$ mm (format of picture taken as 18×18 cm). A complete extinction of reflection can in practice be achieved only at $h \leq 25^\circ$, while in the other cases the reflection with respect to surface and density is considerably reduced. The utilization of polaroids is the more effective, the wider the angle of the objective of the aerial camera. Finally, the method applied in the test under discussion is described. The axis of the polaroid must be marked. The polaroid must then be attached to the aerial camera. The time of exposure must be increased by 1 : 0.5 k, viz., by the threefold. This increase is the chief disadvantage displayed

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by polaroids. Prior to operation, the polaroid must be adjusted correctly, by turning the handle of its frame to the graduation equaling the angle A between the direction toward the sun and the direction of the picture side. Experience has shown that it is by all means possible to adjust a polaroid with a maximum accuracy of 5°. The use of polaroids is not recommended in frequent changes of the flight azimuth with more than 10-15°. The experiment has also shown that the use of polaroids has no effect upon the sharpness and contrast of the pictures of sea-bottom contours or water surfaces. There are 5 figures, 1 table and 18 references: 16 Soviet-bloc.

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Legend to Table 1: 1) the largest S %, in which reflection is extinguished ($h = 25^\circ$), 2) the largest S %, in which reflection is considerably reduced ($h = 25^\circ$).

Таблица 1

α	0°	5°	10°	15°	20°	25°	30°	35°
1) Наибольшее S %, при котором блок гасится ($h = 25^\circ$)	0	2	5	9	15	22	30	40
2) Наибольшее S %, при котором блок значительно ослабляется ($h = 25^\circ$)	0	5	12	22	38	55	60	60

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